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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,994	01/22/2002	Jim Hunter	8229-018-27 CIP	2175

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EXAMINER	
AMARI, ALESSANDRO V	

ART UNIT	PAPER NUMBER
2872	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/050,994	HUNTER ET AL.	
	Examiner	Art Unit	
	Alessandro Amari	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10 April 2007 has been entered.

37 C.F.R. 1.608 (b) Declaration

2. The declaration filed on 22 January 2004 under 37 CFR 1.131 has been considered but is ineffective to overcome the Hawkins US Patent 6,233,087 reference.

3. The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Hawkins reference.

In order to show prior invention, the Applicants must provide facts sufficient to show reduction to practice prior to the effective date of the Hawkins reference. In order to show actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose. See MPEP § 2138.05. None of the exhibits provided in the declaration provide any test results or other demonstrable facts to show that the device will work for its intended purpose.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 3-8 and 10 stand rejected under 35 U.S.C. 102(e) as being anticipated by Hawkins et al US Patent 6,233,087.

In regard to claims 1 and 4, Hawkins et al disclose (see Figures 1 and 2) a reflective light processing element, comprising a substrate (52); a dielectric layer (58) formed on the substrate; a conductive trace (60, 62, 64) formed on the dielectric layer, the conductive trace allowing charges trapped in the dielectric layer to escape wherein said trapped charges are present at least on the surface of the dielectric layer as described in column 5, lines 41-60 and column 6, lines 15-50; and a plurality of ribbons (72a, 72b) formed above the substrate and the conductive trace wherein each of said ribbons comprise a top surface that is reflective and said reflective surfaces exhibit the

same degree of reflectivity as described in column 6, lines 51-62 and as shown in Figure 2.

In regard to claim 5, Hawkins et al disclose (see Figures 1, 2 and 6) a high contrast grating light valve comprising a silicon substrate as described in column 4, lines 63-65; a protective dielectric layer (58) formed on the substrate; a first set of ribbons (72a) each with a first average width Wa and a second set of ribbons (72b) each with a second average width Wb, wherein the ribbons of the first set alternate between the ribbons of the second set and one of said first and second set of ribbons is configured to constructively and destructively interfere with an incident light source having a wavelength X; wherein said substrate comprises a silicon wafer protected by a dielectric layer as shown in Figures 1 and 2; and a conductive trace (60, 62, 64) formed at least partly on the protective layer and in electrical contact with said substrate, allowing charges trapped in the protective layer to escape wherein each of first and second set of ribbons comprise a top surface that is reflective and said reflective surfaces exhibit the same degree of reflectivity as described in column 5, lines 41-60 and column 6, lines 15-62.

Regarding claim 3, Hawkins et al disclose that said trapped charges are formed, with respect to the dielectric layer, during operation of said reflective light processing element as described in column 5, lines 41-67 and column 6, lines 1-50.

Regarding claim 6, Hawkins et al disclose that said dielectric layer comprises silicon dioxide as described in column 7, lines 50-60.

Regarding claim 7, Hawkins et al disclose that said conductive trace is comprised of aluminum as described in column 6, lines 8-10.

Regarding claim 8, Hawkins et al disclose that the width $W_a >= W_b$ as shown in Figures 1 and 2.

Regarding claim 10, Hawkins et al disclose that the reflective surfaces comprise aluminum as described in column 8, lines 30-33.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins et al U.S. Patent 6,233,087 in view of Bloom et al U.S. Patent 5,311,360.

Regarding claim 9, Hawkins et al teaches the invention as set forth above that the top surfaces of the ribbons in said first set and the top surfaces of the ribbons in said second set have reflective surfaces as described in column 8, lines 16-33 and as shown in Figures 1, 2 and 6.

However, Hawkins et al does not teach that the surface between the ribbons of the first set and second set has reflective surfaces.

Bloom et al does teach that the surface between the ribbons of the first set and second set has reflective surfaces as described in column 5, lines 53-56.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to ensure that the surface between the ribbons of the first set and second set is reflective as taught by Bloom et al for the device of Hawkins et al in order to enhance the reflectance of the surface area so as to improve the performance of the grating light valve.

Response to Arguments

7. Applicant's arguments filed 10 April 2007 have been fully considered but they are not persuasive.

The Applicants argue that the Examiner has misapplied the requirements of the MPEP and have further submitted the Declaration of Hunter and Amm of 10 April 2007 to satisfy the burden to demonstrate actual reduction to practice. The Applicants further assert that the absence of actual test results has been satisfactorily explained and in lieu of the lack of actual test results, the Declaration of 10 April 2007 confirms that in fact the testing was done on a zero order device, showing the type of specific results that were obtained, by reference to actual contemporaneous documents (Exhibit A) and that these type of results was obtained prior to the effective date of the reference (i.e., 18 December 1998).

In response to this argument, the Examiner notes that the Applicants have attempted to establish actual reduction to practice by the Declaration of the Inventors Hunter and Amm, dated 10 April 2007. However, as explained previously in the Final rejection of 11 July 2006, a declaration by the inventors that the device was reduced to practice is insufficient without a statement of facts demonstrating this conclusion. The

pertinent passage from MPEP 715.07 is reproduced below for the Applicants convenience:

> Similarly, a declaration by the inventor to the effect that his or her invention was conceived or reduced to practice prior to the reference date, without a statement of facts demonstrating the correctness of his conclusion, is insufficient to satisfy 37 CFR 1.131.

Furthermore, while the arguments state that the Applicants reference actual contemporaneous documents that the device in question was made prior to the date of the reference and that specific testing was conducted prior to the effective date of the reference and indicated by the type of results obtained, the declaration seems to indicate the opposite. Specifically, on page 2 and continuing on page 3, paragraph 4 of the declaration of Hunter and Amm (dated 4/10/2007) the Applicants state on the record:

> "We are not able to identify any specific test, and test results that can be specifically attributed to the device described that were conducted prior to December, 1998. We are certain that such testing was conducted, but cannot positively attribute the testing conducted prior to December 1998 to any specific record."

The Declaration of Hunter and Amm also makes reference to and includes Exhibit A which shows that some sort of charging test was conducted. However, in the Declaration on page 3, paragraph 5, the Applicants state on the record:

> "Submitted herewith, as Exhibit A hereto, is a three page document which reflects the typical charging test that was conducted. The results are attributable to the device described above, and **may have been conducted prior to December 1998, but there is no way to be certain**." (Bold Examiner's)

In the same paragraph 5, the Applicants further state on the record:

> "**Although the testing reflected in Exhibit A hereto cannot be described, by us, within a certainty to have occurred prior to December 1998**, it is reflective of the type of testing that did occur, as we recall, prior to December, 1998 at Silicon Light Machines." (Bold Examiner's)

Therefore, it is not at all clear that the testing in question occurred prior to December 1998 as evidenced by the Inventors own statements above.

The Applicants have also submitted the Declaration of Webb as corroborating testimony so as to confirm, independent of the actual testimony and Declarations of the inventors that in fact testing referred to and described in Exhibit A occurred prior to December 1998.

However, on page 2, paragraph 3 of the declaration, Mr. Webb states on the record:

> "I have reviewed Exhibit A attached to the Declaration of Hunter and Amm, which is a three page document bearing the title "0-order Charging". **I cannot be certain whether or not the testing reflected therein is in fact testing that was conducted prior to December, 1998**, but it is certainly reflective of the kind of testing done, prior to December 1998, testing that demonstrated modulation of reflected light in response to application of electric fields, and dissipation of charges built up in the dielectric layer through the provision of a conductive trace on that layer. This was a device successfully tested at Silicon Light Machines, prior to December, 1998." (Bold Examiner's)

These statements of Mr. Webb appear to be contradictory and ambiguous and cast doubt on whether the testing shown in Exhibit A is to the device in question prior to December 1998 in order to establish actual reduction to practice.

In conclusion, the Examiner believes that objective evidence must be presented in order to establish that the testing of the device in question occurred prior to December 1998. The Applicants have attempted to support their allegation of fact that

testing did occur by submitting Exhibit A and by a supporting statement by a witness (Mr. Webb) that testing of the claimed device did occur prior to December 1998. However, several passages from the declarations of Mr. Webb and the Inventors Hunter and Amm submitted offer ambiguous and contradictory evidence that such testing occurred prior to the reference date. It is the Examiner's considered opinion that the evidence needs to be commensurate to the scope of what is being alleged, namely, that the device was sufficiently tested to demonstrate that it would work for its intended purpose, thus establishing actual reduction to practice. To date, the evidence put forth by the Applicants fails to establish this fact.

Conclusion

8. This is a continuation of applicant's earlier Application No. 10/050,994. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro Amari whose telephone number is (571)272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ava
18 June 2007

Alessandro Amari
ALESSANDRO AMARI
PRIMARY PATENT EXAMINER

Approved: Janice A. Falcone
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